

IN THE CLAIMS:

Please cancel Claims 8, 9, 11, 14, 15 and 18 without prejudice to inclusion in a continuation application.

Claim 1 (Canceled)

Claim 2 (Canceled)

Claim 3 (Canceled)

Claim 4 (Canceled)

Claim 5 (Canceled)

Claim 6 (Canceled)

Claim 7 (Canceled)

Claim 8 (Canceled)

Claim 9 (Canceled)

Claim 10 (Canceled)

Claim 11 (Canceled)

Claim 12 (Canceled)

Claim 13 (Previously presented) The process according to Claim 17 including:

- a) selecting said slip stream as less than about 10% by weight of a total wastewater flow.

Claim 14 (Canceled)

Claim 15 (Canceled)

Claim 16 (Previously presented) A process for biologically treating wastewater comprising the steps of:

- a) flowing influent wastewater with organic components therein into a first anaerobic region;
- b) measuring the average phosphorus content by weight of said influent wastewater;
- c) measuring the average short chain fatty acid content by weight of said influent wastewater;
- d) mixing the influent wastewater in said first anaerobic region with a microorganism biomass to form a mixed

liquor;

- e) flowing a portion of the mixed liquor into a second anaerobic region wherein said biomass ferments portions of said organic components so as to produce short chain fatty acids;
- f) ensuring that the flow of mixed liquor to said second anaerobic region is sufficient to produce enough short chain fatty acids in said second anaerobic region that when combined with the short chain fatty acids in said influent wastewater the total is greater than four times the amount of phosphorus in said influent wastewater by weight;
- g) returning liquid from said second anaerobic region with said short chain fatty acids therein to said first anaerobic region wherein phosphorus is released from microorganisms in said biomass in said mixed liquor and short chain fatty acids are taken up by the microorganisms in said biomass;
- h) thereafter flowing mixed liquor from said first anaerobic region to an aerobic region wherein said short chain fatty acids are metabolized by the microorganisms in said biomass and phosphorus is absorbed by said microorganisms;

- I) thereafter transferring said mixed liquor to a clarifier region wherein clarified liquid is separated from said biomass; and
- j) returning at least a portion of the separated biomass with phosphorus therein to said first anaerobic region.

Claim 17 (Previously presented) In a process for treating wastewater by mixing the wastewater with biomass to form a first mixed liquor in a first anaerobic region and thereafter treating the mixed liquor in an aerobic region; the improvement comprising the step of:

- a) prior to said wastewater entering said first anaerobic region diverting a first portion of said wastewater directly to a second anaerobic region wherein a second mixed liquor is subjected to a lower flow rate than in said first anaerobic region and thereafter returning the mixed liquor from said second anaerobic region to said first anaerobic region; and
- b) flowing a remaining second portion of the wastewater directly to said first anaerobic region.

Claim 18 (Canceled)

Claim 19 (Currently Amended) ~~The~~ A process for biologically treating wastewater comprising according to Claim 18 including the steps of:

- a) collecting wastewater for treatment in a waste water influent region;
- b) flowing influent wastewater from said waste water influent region with organic components therein directly into a first anaerobic region and mixing the wastewater therein with a microorganism biomass to form a mixed liquor;
- c) flowing a portion of the mixed liquor into a second anaerobic region wherein said biomass ferments portions of said organic components so as to produce short chain fatty acids;
- ~~ad)~~ forming a solids blanket of biomass in said second anaerobic region; and
- ~~be)~~ flowing said wastewater in said second anaerobic region upwardly through said solids blanket;
- f) returning liquid from said second anaerobic region with said short chain fatty acids therein to said first anaerobic region wherein phosphorus is released from microorganisms in said biomass in said mixed liquor and short chain fatty acids are taken up by the

- microorganisms in said biomass;
- g) thereafter flowing the mixed liquor from said first anaerobic region to an aerobic region wherein said short chain fatty acids are metabolized by said microorganisms in said biomass and phosphorus is absorbed by said microorganisms;
- h) thereafter transferring said mixed liquor to a clarifier region wherein clarified liquid is separated from said biomass; and
- i) returning at least a portion of the separated biomass with phosphorus therein to said first anaerobic region.